From: <phill.kearney@power.alstom.com>
To: "Dave Spence" <DAVE-S@ipsc.com>
Date: 2/26/01 4:30AM
Subject: Intermountain HP Upgrade - Total Power.

Dave,
The total power output of course, depends on the whole plant, not just the HP turbine. We believe that we have a reasonable model of the plant from modelling your test data, but the total output is still highly dependent on the condenser pressure.

If we assume condenser pressures of 2.99"Hg, 2.24"Hg and 1.66"Hg for conndensers A, B and C respectively, and BFPT exhaust pressures of 1.5psia and 0.8psia, all as shown on figures 1 to 4 of the RFP, then we calculate a total power for Unit 1 of 974 MW and for Unit 2 of 976 MW at VWO and 6.9 Mlb/h flow.

The change from the heat balance diagram TS29200 (supplied with the tender) is due to several factors, not least being that we are now using LP efficiencies derived from analysis of the test results, instead of the very high (unbelievably so) LP efficiency indicated by the operating heat balance diagram "Unit2 Operating Heat Balance (Corr Test)" which was Figure 4 of the RFP and that we used as the basis for the tender. Incidentally, the LP efficiency indicated by the other operating heat balance "Unit1 Operating Heat Balance (Corr Test)" was unbelievably low! (~87%).

You have probably noticed on the latest sheets I sent you an apparent reduction in the HP efficiency from 92.4% including valves that we had in our tender to 92.2% including valves. This is entirely due to the IP rotor cooling steam being taken from HP stage 2 instead of off the HP balance gland. The balance gland flow remains the same as we had in the tender, but instead of some being drawn off to the IP for rotor cooling it now ALL goes to HP exhaust where it mixes with the main flow, raising the temperature of the main flow and thus worsening the measured efficiency. Note however, that the efficiency of the HP blading alone, excluding the effect of the balance gland leakage, remains unchanged from the tender.

Regards,
Phill.

"Dave Spence" <DAVE-S@ipsc.com> on 23/02/2001 14:46:02

To: Phill KEARNEY/MEC/PGD/PGD/GECALSTHOM@GA
cc:
Subject: Intermountain - heater 8 ttd

Phill,